

 **Thera Breath**®



US\$9.95

The
BAD BREATH
BIBLE

by Dr. Harold Katz

The Definitive Resource
on the Symptoms, Causes
and Cures of Halitosis

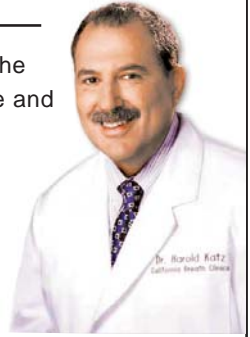


**written by a dentist
for his patients**

About Dr. Katz...

Dr. Harold Katz, founder of The California Breath Clinics, is the recognized expert in the fields of bad breath, sour/bitter taste and dry mouth.

Over the last few years his oxygenating compounds have been used by over half a million people around the world to eliminate their bad breath problems.



Dr. Katz is a 1975 graduate of the UCLA School of Dentistry and holder of a separate degree in Bacteriology, also from UCLA (1971). After establishing a private dental practice in Beverly Hills, California with his brother, Dr. Richard Katz, he began his own research into the Truth About Bad Breath in 1994, after he was unable to help his own 13 year old daughter with her breath problem. Highly advertised commercial mouthwashes were making her breath more offensive, and despite immaculate oral hygiene (brushing 5-6 times daily with the most popular toothpastes and flossing several times a day), the problem persisted. His background in Bacteriology assisted him in realizing that Bad Breath is caused by a group of Anaerobic Sulfur-Producing Bacteria which breed BENEATH the tongue's surface and in the throat. Under certain conditions, these bacteria initiate the production of the Volatile Sulfur Compounds found in Bad Breath and Taste Disorders. Bad Breath DOES NOT come from the digestive system, as some highly advertised products falsely claim.

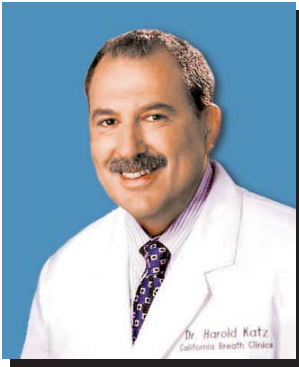
Armed with this knowledge, in late 1994 Dr. Katz began to experiment with various compounds that would attack the Anaerobic Sulfur-Producing Bacteria within the mouth. The resulting products - refined over and over since that time - are nothing short of astonishing. Clinical tests of Dr. Katz's patients have repeatedly resulted in a complete elimination of over 98% of VSC's.

Since 1994, no one has helped more people fight Bad Breath than Dr. Katz -- nearly 27,000 have been successfully treated through his California Breath Clinics in the US and internationally, and over 250,000 people in 89 different countries worldwide have used his TheraBreath System formulas to eliminate Halitosis and regain their lost confidence.

Dr. Harold Katz still sees patients once a month at his office in San Francisco, while his brother, Dr. Richard Katz, sees patients daily in the Century City area of Los Angeles at 10289 W. Pico Blvd. For breath disorder consultation and other professional dental services in the Los Angeles area, please call 310-556-5600.

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A Personal Letter From Dr. Katz

The California Breath Clinics

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The Bad Breath Bible
by Dr. Harold Katz

Thank you for choosing the TheraBreath System for your oral care needs. The California Breath Clinics have been at the forefront in the battle to change the way the commercial oral care companies have typically treated bad breath, lousy tastes, and dry mouth. Our clinically-based home therapies incorporate up-to-date, cutting edge formulas and patented oral care systems that introduce potent oxygenating compounds (based on our proprietary Oxyd-8™ molecule) and specific natural compounds such as zinc gluconate, concentrated aloe vera, tea tree oil, CoEnzyme Q10, and natural flavors.

I started researching the truth about bad breath back in 1993 when my own teenage daughter complained that her friends offered gum and mints whenever her mouth became dry. At that time, the theory was that bad breath came from the digestive system (an unfortunate myth) which led to bogus capsules that were swallowed eagerly by the public but which provided no relief. Because of my experience as a dentist and my degree in Bacteriology (both from UCLA), I performed some basic tests which showed that the problem was bacterial in nature. Further experimentation and clinical trials proved that oxygenating compounds, properly pH buffered (now known as TheraBreath) were by far the best way to battle the anaerobic bacteria that were at the heart of the problem. (more details on our formulas are found later on.)

We are also proud to say that despite our success, we never sit still. Every morning we receive reports from internationally recognized scientists, clinicians, and people just like you, informing us on what works and what doesn't. We also have the ability to bring you the best formula for your specific problem. (There is no such thing as one product for every type of bad breath). I urge you to read through my Bad Breath Bible and if you have any questions, simply contact me by email at drkatz@drkatz.com or by phone at 1-800-973-7374. Most importantly, I want you to understand that I am here to help you!

One more thing – Every time I update the information in print or even online, I end up getting calls from you that you see the same information a few weeks later on other websites. The reason is that there are a lot of “copy cats” out there. But , as one of my first patients told me: There may be a lot of copy cats on the internet, but **there is only ONE Dr. Katz on the Internet!**

Please do me a favor. If you find the information in this book somewhere else eventually....let me know!

A handwritten signature in black ink that reads "Dr. Harold Katz". The signature is written in a cursive, flowing style.

2/24/02

It looks like you work late on a Saturday because I didn't expect a reply on a weekend. Thanks so much for all your help!

Thanks Again, Kumar

What is bad breath? What causes it? Why do I have it?

Almost all cases of bad breath & taste disorders involve a group of anaerobic sulfur-producing bacteria, that live below the surface of the tongue, in the throat, and often in the tonsils (if present). They react to changes in their environment by producing odorous and lousy tasting Volatile Sulfur Compounds (VSC's), such as hydrogen sulfide (the rotten egg smell), methyl mercaptan (similar to the odor of old socks), and several other chemicals, such as Cadaverine and Putrescine.

Before I get too far into the details, I'm going to make a statement that provides the foundation for this book. If there is only one concept that you MUST take away from reading my book, it is this:

The ONLY proven way to eliminate bad breath is to change your existing oral environment so that it is 'less friendly' to creating and sustaining the volatile sulfur producing anaerobic bacteria which cause bad breath and taste.

The rest of this book teaches you the various ways to do this. This is the ONLY WAY that you will be able to effectively eliminate and eventually control bad breath.

The conditions that trigger bad breath and halitosis include, but are not limited to:

- A dry mouth
- Thick saliva
- Excess mucus in the throat
- Post nasal drip
- A diet high in proteins (dairy foods, red meat, beans, etc.)
- Smoking
- Alcohol (in adult beverages or surprisingly in your mouthwash)
- Hormonal changes
- Medications which have dry mouth as a side-effect (anti-depressants, high blood pressure medications, anti-histamines, etc).
- History of Diabetes
- Special types of Diets (i.e. The Atkins Diet or other high protein diets)
- Excessive use of "old-fashioned" oral products (containing alcohol and Sodium Lauryl Sulfate) – check your medicine cabinet now to see if you're in this category.

You may be asking yourself right now, "What about onions and garlic? What does bacteria have to do with the bad breath I get when I eat Italian food?" The truth is that sulfur is also the culprit in cases of bad breath caused by food odors. Onions, garlic, and other spicy foods contain a variety of sulfur compounds, known as mercaptans, which are very odorous.

TheraBreath formulas can eliminate these odors as well, because they can convert the mercaptans into simple non-odorous (and non-tasting) sulfate salts. These are virtually the same type of chemicals produced by the bacteria that are part of the "normal" oral

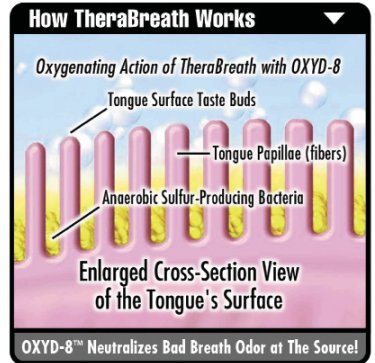
flora found in the mouths of everyone on the face of the earth. In other words, nearly all cases of “real” bad breath and/or taste disorders (or Halitosis as some like to call it) involve good bacteria and should never be treated with antibiotics. As I will explain later on, one of the most tragic mistakes by physicians is to immediately prescribe an antibiotic for bad breath, especially when they never seem to look in your mouth or at your tongue before doing so! (Be patient, I will soon get to the concepts that really work).

Bad Breath Does NOT Come From Your Digestive System

Think of this: You go out to lunch and eat the biggest meal in your life. Afterwards you bend over to tie your shoes. Does your lunch fall out of your mouth? Of course not, there is no open tube, connecting the large intestine, small intestine, and stomach to your esophagus and out your mouth. There are valves, muscles, sphincters, etc. that keep digested food in its proper place. If one burps or belches constantly, that odor is not what we are discussing here. That can be controlled. However, we have found that many people have a hard time distinguishing between an odor emanating from the throat/tonsil area and the digestive system – and that is important because we’ve been able to provide a valid, reproducible treatment with formulas such as TheraBreath PLUS Extinguisher Spray (available online and at Walgreens, Eckerd, H-E-B, Brooks, etc.), AktivOxygen tablets (made into a liquid solution), and TheraBreath Nasal Sinus formula, that attack these areas directly. Of course, the basic treatment, which you will see mentioned frequently, is the use of any of our Oral Rinse (TheraBreath, TheraBreath PLUS, PerioTherapy, AktivOxygen Tablets, AktivOxygen Serum) and any of our toothpastes (TheraBreath, TheraBreath PLUS, AktivOxygen, TheraBrite, PerioTherapy). For specific instructions on how these formulas are used, please see Appendix A (see page 35).

Bad breath is caused by Anaerobic Sulfur Producing Bacteria which normally live **BELOW** the surface of the tongue and in the throat. These bacteria are supposed to be there, because they assist humans in digestion by breaking down proteins found in specific foods, mucus or phlegm, blood, and in diseased or “broken-down” oral tissue. Under certain conditions, these bacteria start to break down proteins at a very high rate. Proteins are made up of Amino Acids. Two of the Amino Acids (Cysteine and Methionine) are dense with sulfur.

When these “beneficial” bacteria come into contact with these compounds, the odorous and “lousy-tasting” sulfur compounds are released from the back of the tongue and throat, as Hydrogen Sulfide, Methyl Mercaptan, and other bad tasting compounds. These “problem” compounds are often referred to as volatile sulfur compounds (VSC), where volatile is taken to mean Vaporous and Effervescent, two adjectives which accurately describe their ability to offend other people instantly.



Because my original degree is in Bacteriology, let me explain a very important fact about these “bugs”. They are not “bad guys” - they are not infectious. **Everyone in the world has the same group of bacteria in their mouth.** You cannot “catch” bad breath from someone else - even by kissing. Since they are part of our normal oral flora, you cannot permanently remove them from your mouth - not by tongue scraping, not by antibiotics, and not by rinses which claim to “lift the bacteria off your tongue”. The only scientifically proven and clinically effective method of halting Halitosis is by attacking the bacteria’s ability to produce VSC’s and by converting the VSC’s into non-odorous and non-tasting organic salts. (I should know, I’ve personally treated over 20,000 people at my California Breath Clinics and I’ve helped thousands more through my TheraBreath formulas.)

Take a look at a small fraction of our testimonial letters at:

<http://www.therabreath.com/about/testimonial.asp> and listen to the thousands of people who are ecstatic that TheraBreath has helped them prevent bad breath and regain their confidence!

Speaking about bacteria, there is one other fact that you must understand about these bacteria. They are classified as “Anaerobic” - which literally means “Without Oxygen”. They thrive in an environment where Oxygen is NOT present. That is why they **DO NOT LIVE ON THE SURFACE OF YOUR TONGUE!** They live in between the papillae (fibers) that make up your tongue!

These sulfur compounds are actually by-products of anaerobic bacteria (Fusobacterium and Actinomyces, among others). Everyone needs these bacteria, because they assist in the digestion process. But unfortunately, for some as yet undetermined reason these particular bacteria are found in higher numbers in those plagued by Bad Breath. (Various theories attribute this to hormonal changes or a history of medications (usually antibiotics or sulfa drugs) which create an imbalance in the oral flora. We do know however, that it seems to be evenly split between men and women.

Having Dry Mouth is a Leading Cause of Bad Breath

Although some cases of dry mouth are naturally occurring (we produce less saliva as we get older, starting in the mid-20s), most cases are caused by one of these factors; prescription medications (usually prescribed for high blood pressure or depression) antihistamines, adult beverages and mouthwashes with alcohol in them.

When your mouth is drier, you have less saliva, among other soluble components. Saliva contains a healthy helping of Oxygen, which keeps your mouth healthy and fresh. These bacteria are anaerobic, which simply means that they will thrive and make more sulfur in the presence of little or no oxygen. Thus if you have less Saliva, you have less oxygen, thereby creating an anaerobic environment, perfect for the bacteria to produce more of

these odorous and sour/bitter compounds. For people with Dry Mouth, products such as ZOY Breath Lozenges can help (<http://www.therabreath.com/products.asp?CAT=5>).

Excess Mucus (or Post-Nasal Drip) is actually a Food Source For Those Anaerobic Bacteria

We know that proteins are made up of chains of amino acids, which in turn contain sulfur compounds (see text above). When a person has post-nasal drip, mucus drains and coats the back of the tongue and throat, exactly where bacteria live. Since mucus is made up of interlinked strands of protein, the bacteria have a field day, breaking down these proteins into odorous and sour tasting sulfur type compounds. Strong antihistamines don't help, because the drying effect of the antihistamines also creates a problem (by reducing the amount of germ-controlling saliva). The only method of ending the bad odor and sour taste are to use Oxyd-8 based oral products. Many of my patients with post nasal drip have claimed great success with use of the Nasal Sinus Drops or Nasal Sinus Spray (<http://www.therabreath.com/products.asp?CAT=4>).



Can Bad Breath Come From The Sinuses?

After personally treating over 25,000 people through my clinics, I have yet to see a patient get rid of his bad breath just from having sinus surgery. First of all, these anaerobic bacteria cannot live in the sinuses (although the VSC's they produce may flow into the sinus passages). When someone has a sinus infection, one of the common symptoms is intense sinus headaches, caused by the pressure from the infection in the sinuses. If you don't have these powerful headaches, you probably don't have a sinus infection. The fact is that once someone has an elevated amount of these anaerobic bacteria, they will create the problem from any protein source, including mucus, phlegm, etc, which drains down the back of your throat into the area where these bacteria live.

However... if you do have sinus problems (excess mucus, post-nasal drip, etc.) then this COULD be making your bad breath worse. This is because the proteins in mucus act as a food source for the bacteria. Many of my patients have found huge relief from my Nasal-Sinus Drops or Spray (<http://www.therabreath.com/products.asp?CAT=4>). Just 1-2 drops or 1-2 squirts into each nostril effectively neutralizes any existing VSC's found in the nose, sinus, and posterior sinus area. However it's important to realize that unless you stop the production of VSC's at the source (the back of the tongue and throat), new VSC's will continue to move into the sinus area.

Why Do Some Foods (Onions, Garlic, Milk, Coffee, etc.) Make Your Breath Worse?

These bacteria love those proteins, and certain foods are packed with them:

Onions and garlic already contain powerful volatile sugar compounds, called mercaptans -- eating them simply adds more odor -- which can sometimes enter the lungs and blood-stream. Using our products everyday will even prevent onion and garlic breath by “gobbling-up” the VSC’s immediately.

Milk and Cheese and most other dairy products are usually problems for most people (The fat content does not matter, so low fat milk is just as problematic as butter.) If you are lactose intolerant, do not eat or drink these dairy products! Since your system cannot digest them properly, they are available to the bacteria for an extended period of time. A research article from the Los Angeles Times (November 1996) on lactose intolerance showed that nearly 67% of all Americans can be classified as “Lactose Intolerant”. This is due to the fact that in a diverse population such as we have here, there is a predilection for Asians, Hispanics, and African-Americans to be lactose intolerant.

Fish are high in proteins. As many people eat a high fish diet, logically they can make the problem worse.

Coffee with caffeine (and even without) contains high levels of acids which cause the bacteria to reproduce more rapidly and create a bitter taste for many people. (Virtually any acidic type of food will do this.) Tea is a much better alternative. Coffee drinking was one of the problems that my patients used to have. After starting my treatment, they have been able to go back to coffee drinking (in moderation of course) without any bitter tastes afterward.

More information on problem foods can be found later in this book (see page 14)

What are the Symptoms of Bad Breath?

Do Any of These Common Signs of Bad Breath Sound Familiar?

These symptoms are commonly found in my patients who complain about bad breath and/or have been diagnosed with chronic halitosis. Do any of them sound familiar to you?

- A White Coating on Your Tongue?
- Your Doctor Misdiagnoses your Problem or Worse Yet, Ignores You!
- Post Nasal Drip, Allergies or Mucus?
- Whitish Round “Globs” in Your Tonsils?
- Dry Mouth, Morning Breath, or Burning Tongue?
- Thick Saliva or Constantly Clearing your Throat?
- People Offer you gum and mints?

- People Turn Their Heads/ Back Away?
- Bad Taste After Beer, Milk, Coffee, Mouthwash?
- Loss of Confidence and Self-Esteem?
- Constant Sour, Bitter, or Metallic Taste?
- No Help when Scraping Tongue?
- No Relief from Brushing & Flossing?

How Do You Know If YOU Have Bad Breath?

So how can you test your own breath? Good question. It is impossible to smell your own breath by simultaneously exhaling and cupping your hand up to your nose and smelling. (Although it's a great way to smell your hand.)

Your body is designed in such a manner, that you cannot detect your own odor this way. It's a human process called "Acclimation", which is necessary so that we are able to smell other things besides ourselves.

There are 2 "scientifically-proven" ways to check if your breath is offensive:

1. **At the California Breath Clinics** through the use of the Halimeter, which measures the concentration of Sulfides in your breath. Readings above 75 ppb (parts per billion) indicate a breath odor that would be detectable by someone sitting next to them. You may have seen the Halimeter on TV. I recently demonstrated it on "The View" with Barbara Walters and I also used it on Fox News, The Donnie and Marie Show, The Today Show, etc. It is a very accurate instrument and your dentist (if she/he cares about their patients) should have one, because a high reading on the Halimeter may indicate a predisposition to gum disease. You may want to tell your dentist to contact me about purchasing a Halimeter for their office.
2. **At home, by using The Bad Breath Detective** (<http://therabreath.com/products.asp?cat=7&pid=46>) - a scientifically based HOME test for bad breath, which measures the amount of sulfur coming from your tongue by simply swabbing the back of your tongue and placing into the test tube that comes with the Bad Breath Detective. Costs as little as \$10 per test.

If neither of these methods are available to you, there are a few quick home tests, which will give you a good indication if your breath offends - and they cost you nothing (but they're not as accurate as the 2 methods described above). They are:

- Wipe the top surface of your tongue with a piece of cotton gauze and smell that. (That's probably the most honest way.) Furthermore, if you notice a yellowish stain on the cotton, it's likely that you have an elevated sulfide production level.
- Lick the back of your hand. Let that dry for about 10 seconds and then smell. If you notice an odor, you have a breath disorder because the sulfur salts from

your tongue have been transferred to your hand. (I've demonstrated this concept countless times on TV (on ABC's The View with Barbara Walters, for example), during live radio interviews, etc. Some now even call it the "Katz Wrist Lick Method"!

- Run a piece of dental floss between your back teeth (especially where you may get food caught) and then smell the floss. This may be an indication of the level of odors others may detect.
- Stand in front of the mirror and stick your tongue out as far as possible. If you notice that the very back of your tongue is whitish, it may be a sign that you have bad breath. Also, you can judge the reaction from others. Our patients tell us that they are no longer offered gum and mints and people no longer step away from them. It has significantly changed their confidence and improved their lives.
- Ask the opinion of someone you can trust. Ask them to check your breath several times daily because breath changes throughout the day.
- If certain foods alter your taste, it is a good sign that sulfur compounds are being produced. This usually happens after using Alcohol based mouthwashes, eating dairy foods, drinking alcoholic beverages, or after eating sugary products.

If any of the tests above prove positive (ie you notice an offensive odor or taste), you may want to take our free online breath test, which will further assist you in your search for fresh breath and taste. The breath test can be found online at <http://www.therabreath.com/breathtest.asp>. These are the same questions we ask in our clinical therapy, and we will provide you with a recommended program based on your specific responses.

So What Kind of Treatments Are Out There and What Solutions Really Work?

Some Interesting Facts About Bad Breath

In the early 1990's several facts became evident about bad breath:

- It was produced by anaerobic (oxygen-hating) sulfur-producing bacteria, breeding below the surface of the tongue, and often in the throat and tonsils (if present)
- It very rarely came from the digestive system. That's why the company whose product claimed to 'stop bad breath from the digestive system by swallowing capsules' was sued for false claims and eventually filed for bankruptcy. They lied to the public so often over several years in the 1990's that the public started to believe the lies leaving the lips of George Kennedy, that "bad breath comes from the stomach" and that by swallowing capsules full of oil, you would no longer have bad breath. Let's put that myth to bed right now.....it's not true.

- To attack the anaerobes that cause bad breath, one needed to add to their oral environment a highly potent, yet stable form of oxygenating compound. That compound became Oxyd-8, the active ingredient utilized in most TheraBreath formulas.
- And, in those situations where Oxyd-8 is not applicable, potent zinc compounds (ZOX) with other natural ingredients have been developed that literally put an effective straight jacket around the bacteria that cause bad breath.
- Some formulas claim to stop the production of sulfur compounds by the bacteria – but what about the existing odors in the oral cavity? Well, Oxyd-8 does both – it knocks out the “bugs” for 12-24 hours and “sucks up” all existing sulfur compounds, creating fresh breath and eliminating sour/bitter/metallic tastes.
- Despite the false cries from jealous competitors, Oxyd-8 is made directly from “active” ClO₂ – a strong oxidizing (oxygen-donating) compound, used in water purification for many years. We do not use tech grade sodium chlorite, which is slow acting and sluggish in response to bacterial cell walls.
- Furthermore, our patented AktivOxigen tablets create active ClO₂ by dissolving them in water. An 8 oz. bottle of water and one tablet is sufficient to create a week’s worth of oral rinse. (<http://www.therabreath.com/products.asp?CAT=2>)

8 Reasons Why TheraBreath is Superior to Other Oral Care Products

1 Our active ingredient is stabilized and generates Oxidizing Power as soon as it enters your mouth. This stabilization process allows TheraBreath to have up to a 3 year shelf-life. [NOTE: When any of the TheraBreath products enter your mouth, a chemical reaction takes place, which allows PLENTY of Active Oxygenation to take place each and every time you use it. That’s why thousands of bottles and tubes of TheraBreath products are sold every week in just the U.S. alone!]

2 TheraBreath has become the most “user-friendly” fresh breath system, featuring Oral Rinse, Toothpaste, Breath Spray, Concentrated PowerDrops, Oxygenating Chewing Gum, (all in both regular and Extra Strength versions), as well as Nasal Sinus Drops and ZOX Breath Lozenges, all designed to attack the root of the problem throughout the day with the utmost of convenience. Some Breath-refreshing systems rely solely on mouthwash to fight bad breath.

3 TheraBreath Toothpaste comes in a Fluoride version which fights decay and tooth sensitivity, as well as in a non-fluoride version (which contains Xylitol to fight decay). Fluoride has also been shown to be an effective desensitizing agent. Some of the other “Anti-Halitosis” systems do not contain any

Fluoride at all. Either way, TheraBreath Toothpaste helps to fight decay, as well as bad breath, lousy tastes, and dry mouth.

4 We have added **highly concentrated Whole Leaf Aloe Vera** to our toothpaste. Recent research in Asia has shown that Aloe Vera boosts the body's ability to create collagen, which in turn strengthens weak and swollen gums to heal more quickly. (Bleeding gums provide a protein 'food source' to the bacteria that create bad breath). No other "anti-Halitosis" system contains this form of Aloe Vera to fight this additional problem.

5 Our toothpaste **does not contain Saccharin**. (many other breath-refreshing products, such as Oxyfresh, TriOral, and Closys II do). Saccharin has been shown to be carcinogenic in lab animals and the state of California has recently published a long term study on its negative effects. Also, for some people, Saccharin creates a bitter aftertaste, due to one of the chemical compounds produced during Saccharin's chemical breakdown.

6 TheraBreath toothpaste **does not contain Sodium Lauryl Sulfate** (a harsh detergent), which among other things has been shown to be related to an increased incidence of canker sores (see page 23). Almost all toothpastes (including TriOral and Oxyfresh) contain this chemical. Even Tom's of Maine Toothpaste has it! Research has shown that SLS should not be used by those who suffer from canker sores, those who are diabetic, or those who suffer from dry mouth (see below). And because TheraBreath toothpaste does not contain SLS, (which will cause high levels of foam in the mouth), you will be better able to cleanse these odor-causing bacteria from your mouth by being able to brush longer.

7 Our **toothpaste is actually a gel**. Chemically speaking, gels are much smaller molecules than pastes, allowing deeper penetration below the surface of the tongue. TheraBreath toothpaste also contains premiere tooth polishing and whitening agents, in order to keep your smile white and brilliant, but without the damaging abrasives. They are animal cruelty-free and are not harmful to the environment. And, we've recently received Kosher certification on all of our rinses, toothpastes, sprays, drops, and mints. This means that we use only pure vegetable or mineral based ingredients - no animal or animal-based ingredients.

8 All of our toothpastes now contain a new type of mineral protectant called **poly-pyrophosphate technology**. Basically, these natural minerals prevent calculus, tartar, and plaque from sticking to tooth enamel, creating cleaner teeth, and healthier gums. No other "breath" toothpaste contains these beneficial minerals (in fact, very few manufacturers have bothered to spend the funds to add this to their formulas - I guess their bottom line comes before your gumline!)

Detailed Info on the Causes of Bad Breath (for those who REALLY want to understand what is happening in their mouths!)

What Do Dry Mouth and Saliva Flow Have to Do With Bad Breath

Saliva is a very important part of Oral Health. With regard to the topic at hand (bad breath), Saliva provides 3 important functions:

1. Provides enzymes to help with the digestion of food
2. Provides a method to stabilize the pH (keep the acid levels in check)
3. Provides high levels of oxygen in order to keep oral tissues healthy and fresh.

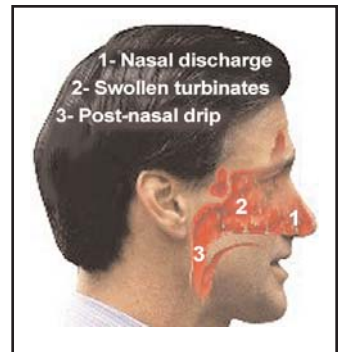
If you suffer from dry mouth (Xerostomia), you naturally have less saliva. In turn, less saliva means less oxygen. If there is less oxygen available in the oral environment then you have an 'anaerobic' environment, which literally means 'without oxygen'. An anaerobic environment is a perfect home for these odorous sulfur-producing bacteria. In essence, the bacteria are now capable of making high levels of sulfur gases, which in turn make the breath and taste worse. For additional information, see my article about dry mouth at http://www.therabreath.com/art_drymouth.asp

Post Nasal-Drip, Excess Mucus, the Sinuses, and Their Interaction

Post Nasal Drip can easily create a breath disorder and happens to be one of the main causes of bad breath in children.

As we've said before, the bacteria that create the odors of bad breath make themselves at home on the very back of the tongue. Because the chemistry of post-nasal drip contains proteins made up of the amino acids Cysteine and Methionine, the bacteria break down these proteins into Hydrogen Sulfide (the rotten egg smell) and Methyl Mercaptan (the smell of old socks). The same chemical process takes place when someone has a cold or sore throat and is often referred to as "the sick smell".

Studies by Miyake, Iwai, and Sugai prove that the Nasal microorganism *Staphylococcus Aureus* is found on the back of the tongue's surface in about 33% of all healthy children sampled. Additionally, studies in Belgium suggest that the discharge acts as fuel when hitting the bacteria. (This can be reproduced by scraping some of the discharge off the back of the tongue and letting it sit untouched for a few minutes, allowing the "bugs" to do their thing...within minutes, a strong "halitosis odor" will develop.) This also explains why so many people with bad breath also suggest that their breath odor "comes from the nose" and not from



the mouth, tongue or throat. After all, these locations are extremely close to one another, especially so in kids. There are some rare cases of strict nasal malodor, with no associated oral malodor. They are usually attributed to physical abnormalities such as polyps or active infections.

Mouth breathers are more prone to bad breath, as are snorers. This is due to the force of air constantly drying off the oral tissues and tongue surface, which interrupts the healthy protection afforded by saliva.

One cause of bad breath and associated nasal malodor, is a foreign body stuck in the nose. Fortunately, these cases are almost always limited to small children (we hope). These foreign objects can range from food to hard beads. In cases of bad breath in small children, it is wise to first check the nasal passages to make sure they are not blocked.

In even more rare instances, inefficient swallowing of small objects may create localized infections in the upper respiratory tract, creating oral malodor, without the most common symptoms present. One of the more famous cases of this nature tells of a football player who, when tackled very hard, actually swallowed some turf. The foreign object putrefied in the lung alveoli over time and created a terrible breath disorder for this fellow. It wasn't until years later that the foreign object was discovered and surgery removed the source of the problem. One of our most successful formulas deals directly with the problem of bad breath, related to post nasal drip and allergies. This is our TheraBreath Nasal Sinus Formula (<http://www.therabreath.com/products.asp?CAT=4>). Just squeezing a few of the drops into each nostril (and then lightly inhaling to make sure the formula gets back far enough) allows the formula to hit its mark – the back of the throat and tongue, where the anaerobes easily process the amino acids in the proteins of mucus and phlegm. It's now also available in a handsome spray, too.

If you are looking for a device to assist in the reduction of post-nasal drip and excess mucus, then you will want to use the Nasal Sinus Irrigator. (see pg 28) for more information or go to: <http://www.therabreath.com/products.asp?cat=7&pid=111>

Specific Foods That Lead to Bad Breath

As mentioned previously in this website, the bacteria that create the volatile sulfur compounds of bad breath and taste disorders react to various changes in their environment. One of the most common changes to the oral environment is the introduction of food.

Of course, everyone knows that Onions and Garlic will create bad breath. But do you know why? It's because the odorous molecules in onions and garlic are actually sulfur compounds themselves. (Sulfur is nature's way of creating odors.) You're all familiar with the skunk. It's odor is created as a defense mechanism. Skunk odor is made up of components (skatoles, etc.) which are natural sulfur compounds.

Food, if it sits out too long will spoil. That action is due to anaerobic bacteria breaking down proteins in that particular food. In milk, the odor of sour milk is caused by relatives of the bugs that create bad breath, when they break down the lactose protein and allow

the release of the amino acids which in turn end up becoming volatile sulfur compounds, exactly the same compounds found in bad breath. The same analogy applies to meat if it sits out too long.

There are 4 categories of foods that will result in an increase of sulfur production. All of the categories below have a stimulating effect on the bacteria:

1. **Drying Agents:** The most common drying agent in food is Alcohol. Alcohol, of course, is the basis of all “adult” beverages such as Beer, Wine, and Hard liquor. It is also used, unfortunately, in mouthwash, where it only makes the problem worse. Alcohol is known chemically as a desiccant. It is used quite often in laboratories to “dry out” hard to reach areas in test tubes and beakers. The same end result takes place in the oral cavity. By the way, the alcohol contained in those old-fashioned mouthwashes are not utilized to kill any bacteria, but to make sure that the mouthwash look pretty on the shelf. This is because the artificial flavoring and coloring chemicals they need to use (to burn your mouth) are insoluble in water, but are soluble in alcohol.

Although cigarettes are not really food, smoking is probably the quickest way to dry out your mouth, with alcohol the second. If you smoke, you are bound to have bad breath!

2. **Dense Protein Foods:** Dairy foods are notorious for creating bad breath. An article in the Los Angeles Times once noted that over two-thirds of the population in Southern California were “Lactose Intolerant”. This means that tens of millions of people worldwide cannot breakdown the lactose protein in dairy foods (milk, cheese, yogurt, ice cream, etc). The end result is a buildup of amino acids, which are easily converted into volatile sulfur compounds by the anaerobic bacteria found within the surface of your tongue and throat. To a lesser extent, we have seen patients who have the same problem with other dense protein foods such as: Beef, Chicken, Fish.

Another problem, thankfully rare, has to do with people who have an inability to break down certain proteins found in beans. This condition is called TMA (Trimethylaminuria) and is sometimes known as the “Fish Odor Syndrome”, because the odor produced is similar to decaying fish. The odor consists of sulfur compounds, plus nitrogen compounds (amines). People with this condition must abstain from beans and other dense protein foods.

When I talk about how proteins found in foods can affect your breath, people often ask me incredulously “So you mean that I can never eat any of these foods again?” And, of course, that’s NOT what I’m saying. You can eat anything you like. The only reason I tell you this information is that you need to be aware that eating these types of foods will affect your breath – so be aware of this, and use an oxygenating formula such as TheraBreath after you eat these foods.

3. **Sugars:** Wouldn’t it be great if we could get rid of bad breath by chewing on M&Ms? Or what if the cure for bad breath were Hershey Kisses? That’s what the makers of ALTOIDS would have you believe. Altoids, and other products of the same ilk, are try-

ing to fool the public into believing that a strong, “good” taste in your mouth is equivalent to the “goodness” of your breath. It is really so anti-science, as to be absurd. If you think about it for a minute, it doesn’t even make sense. By using concentrated MINT flavorings, your taste buds pick up MINT as a taste. However, ALTOIDS contain 2 types of sugar, which are fuel for the bacteria to reproduce and create more sulfur compounds.

In addition (and here’s the frightening part), other bacteria can take the sugars and produce glycan strands, which in turn end up causing thick layers of plaque on your enamel and around your gums. This leads to tooth decay and gum disease - and of course, worse breath than when you started. But, since you can’t smell your own breath, you just go merrily along with that great strong mint taste in your mouth, while others close to you are backing away - backing away from your increased bad breath, decayed teeth, and gross, swollen, bleeding gums!

The bottom line is that **if you are concerned about your breath, stay away from candies, mints, and chewing gum if they contain sugar.** As an alternative, we have created TheraBreath Oxygenating Chewing Gum. It releases Oxygen molecules directly into your mouth and also contains the antibacterial agent Zinc Gluconate (found in many cold medications). In addition, as a sweetening agent we chose Xylitol, which is a natural ANTI-DECAY compound (Not SUGAR!) And, we’ve selected natural flavors that stimulate saliva production - and taste great too! For additional information go to: (<http://www.therabreath.com/products.asp?CAT=5>).

4. Acidic Foods: Some acidic foods you should watch out for are:

- Coffee - both decaf and regular have acids (Tea is OK)
- Tomato Juice
- All Citrus Juices - Orange Juice, Pineapple Juice, Grapefruit Juice

The reason why acidic foods are a concern has to do with the way the bacteria react to an acidic environment. First, let me get a definition out of the way. pH is a term used to describe the acidity of the environment. (refer to picture) The oral cavity has a normal pH of 6.5 (7 is neutral) which is in the acid range.

We know that acids make the bacteria reproduce much faster. Our products are the only ones to be pH balanced in order to absorb oral acids -- this aids in reducing tooth decay as well. That is why our products do not leave a strange aftertaste like other products. As one patient recently told me: “I’m so glad I found your products. The taste of (a competitor’s product) was worse than having the bad breath!”

Furthermore, acids easily create sour bitter metallic tastes. The more acidic, the worse the taste. TheraBreath is the only oral rinse that acts as an anti-acid mouthwash because it will neutralize oral acids. For a detailed list of commercial mouthwashes and their level of acidity, take a look at the chart on the next page:

Various Commercial Mouthwashes	pH	Acid Level
The 'Natural' Dentist	3.2	More Acidic | | | | | | | Less Acidic
Peroxyl	3.7	
Listerine	4.3	
Breath-Rx	4.7	
Scope	5.4	
TriOral - 2 phase	5.7	
Rembrandt	6.5	
Water (neutral)	7.0	
TheraBreath	8.2	an 'antacid' mouthwash

Medications That May Lead To Bad Breath

Many people are unaware that the medications that they've been taking for years have actually contributed to their bad breath and taste disorder. It all boils down to the unfortunate side effects of many medications which include dry mouth and an alteration in taste perception. We have compiled the following list for you, along with a list of other common medications:

Medication	Use	Dry Mouth Sour Taste Symptom Listed	Notes
Prilosec	Reflux and Ulcer	Yes	Often mistakenly prescribed for Bad Breath.
Prozac	Antidepressant	Yes	Mistakenly prescribed because doctors think that patients are imagining their bad breath.
Zocor	Cholesterol	No	
Zoloft	Antidepressant	Yes	See Prozac
Zantac	Digestive	No	Often mistakenly prescribed for Bad Breath
Claritin	Antihistamine	Yes	
Paxil	Antidepressant	Yes	See Prozac
Norvasc	Angina Relief	Yes	
Vasotec	High Blood Pressure	Yes	
Imitrex	Migraine Headaches	No	

See Appendix "C" (pg 40) for a very detailed list of most medications that have a negative impact on your breath and taste.

Specific Breath Problems and Other Related Situations

Since I established the California Breath Clinics back in 1993, I've encountered just about every kind of breath condition possible....from the most offensive situations where you can smell the patients breath from across the room, to those lucky few with breath sweeter than a baby. We've been very fortunate in that we've been able to tackle all types of bad breath, taste disorders, and dry mouth with our TheraBreath line of products. But, I wanted to share something special with you regarding a category of bad breath and sour/bitter taste common to just about everybody.

35% of the world's population has a chronic, noticeable breath condition which usually leads them to seek help from a professional (which may often be incorrect.) This first group has bad breath concerns 24 hours a day, including food odors, taste disorders, dry mouth, and of course "morning breath".

Another 35% are "borderline" meaning that their breath seems fresh throughout the day, but they can easily reach "chronic" levels, if they eat certain foods (dairy, alcohol, sugars), after taking medication (antihistamines, antidepressants, high blood pressure medication) and always when they wake up, in other words - "morning breath".

The remaining 30% rarely worry about their breath. The only exceptions are when they eat garlic and onions, or upon wakening (morning breath).

So what's going on with morning breath? ***The thing is, just about EVERYONE has morning breath to one degree or another!***

As we sleep throughout the night, our salivary glands slow down (or for some older people - shut down completely) because our brain knows we are not eating. This, combined with the constant flow of air (for those of us who snore or are mouth breathers) over our palate makes for a very DRY environment on the tongue, within our oral cavity and in the throat (breeding grounds for anaerobic sulfur-producing bacteria that cause bad breath and taste disorders). As I write about in my article on dry mouth (http://www.therabreath.com/art_drymouth.asp), this creates an environment that is very conducive for 'morning breath'. (Saliva is nature's way of protecting us from bad breath, because healthy saliva contains high concentrations of oxygen - the natural enemy of anaerobic bacteria.) So if you get morning breath after a good night of sleep - don't worry, you're not alone!

But what most people don't know (and this includes most medical and dental professionals), is that ***morning breath is NOT something that you have to live with.***

How To Stop Morning Breath In Less Than 45 Seconds Per Day

The key is to find a way to stop the production of VSC's (volatile sulfur compounds) during the night as you are asleep. One way would be to increase the production of saliva within the back of your throat and mouth during the night. But this is very difficult to do - after

all, you're asleep! And those of us who are mouth breathers are drying out the back of our throats with each breath that we take throughout the night.

A better way (and easier way) is to stop the production of sulfur compounds by the bacteria that create morning breath - and this is exactly what my AktivOxygen Tablets are designed to do!

AktivOxygen tablets (<http://www.therabreath.com/products.asp?CAT=2>) are small, highly concentrated bad breath eliminators! I created them a few years back in response to many of my customers demands for an effective oral rinse that reached the deep recesses of the throat and tonsil area.

To use AktivOxygen, just dissolve 1 or 2 tablets (depending on the severity of the problem you are trying to correct) in regular tap water in the included 8 oz. mixing bottle. Shake well for about 10 seconds and you will have a POWERFUL, unflavored oral rinse that will destroy the bad breath bacteria on contact.

What makes this rinse so effective is that you can actually swallow the resulting solution and slowly let it run down the back of your throat and tonsils. If you do this right before bedtime, this actually coats your throat for the entire night and virtually eliminates morning breath. I have to admit that I did not think of this concept. One of my earliest patients tried it to eliminate her tonsil stones and she excitedly told me about her success in doing so.

AktivOxygen Tablets are easy to use and affordable - and they are the best way I know of for the average person to rid themselves of morning breath.

Plus, many of you who suffer with Tonsiloliths (that's the scientific term for those nasty odorous globs growing deep in the crypts of your tonsils - see page 23) or congested sinuses will find instant relief from using the combination of AktivOxygen tablets and Nasal-Sinus Drops. Nasal Sinus Drops (<http://www.therabreath.com/products.asp?CAT=4>) are potent drops you put in your nose that slowly trickle through your sinuses and down your throat destroying the bad breath bacteria on contact.



AktivOxygen Tablets Instructions for Use:

1. Dissolve 1 or 2 tablets in the 8 Ounce Mixing Bottle. Be sure to use the opaque bottle that comes with the system otherwise the solution will lose its potency.
2. Shake well for 10-20 seconds.
3. Before bedtime, tilt your head back and swallow 1 or 2 capfuls of the solution. Let it slowly run over your throat and tonsil area for maximum effectiveness.
4. *Important* In order for the solution to be in contact with your tonsils and throat for a sufficient time period wait 5 minutes until you eat or drink anything after use.

5. Keep cap tightly closed after use.

Nasal-Sinus Drops Instructions for Use:

1. Blow nose before use.
2. Tilt back head and gently press sides of dropper bottle to release 3-5 drops into each nostril.
3. Allow nasal-sinus drops to slowly run back through your sinuses and down the back of your throat.

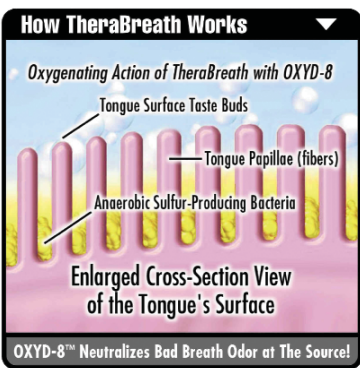
Note: All TheraBreath formulas are designed to be used as a system. When looking for the best results, make sure to use AktivOxygen Rinse and Sinus Drops with any of our toothpastes, oral rinses, breath sprays or chewing gum.

Various Tongue Formations Which Lead To Bad Breath

There are various types of “tongue formations” which are merely descriptions of the geography of the tongue. Generally, the rougher one’s tongue, the more likely they are to have a bad breath problem. This is connected to the belief by some that “bad breath” can be an inherited trait. Truthfully, one cannot inherit the bacteria of bad breath, but one CAN inherit a specific “shape or geography” of tongue, just as one would inherit a parent’s eye color, hair color, height, and ear shape.

Some tongues have a deep groove going down the middle of the tongue; this is known as a “fissured” tongue and it may lead to a great deal of the anaerobic bacteria breeding at the bottom of this fissure, because Oxygen cannot get to the bottom of the fissure (another reason why tongue scraping without oxidizing products, is a waste of time.)

Some people may have a condition known as “hairy tongue”, which again describes the fibers that make up the tongue (papillae), being slightly longer than the norm. The longer the papillae, the more rough the appearance of the tongue and of course the better to trap the sulfur producing bacteria.



This is the Reason Why Tongue Scraping alone won't work and may damage your tongue! As you'll note in the accompanying diagram, the sulfur compounds are actually by-products of anaerobic bacteria (Fusobacterium and Actinomyces, among others) which do not breed on the surface of the tongue, but deep within the fibers of the tongue.

Everyone needs these bacteria because they assist the digestion process. But, unfortunately, for some undetermined reason these particular bacteria are found in higher numbers in those anguished by Bad

Breath. (Various theories attribute this to hormonal changes or a history of medications, usually antibiotics or sulfa drugs-which create an imbalance of oral bacteria.) We do know however, that it seems to be evenly split between men and women.

The solution is to put a little bit of TheraBreath toothpaste on your tongue scraper, and gently scrape the surface of your tongue. Allow the gel to sit on the surface of your tongue, as far back in the throat as you can stand without gagging. This allows the oxygenating compounds of the toothgel to penetrate below the surface of your tongue and destroy the bacteria breeding beneath the surface.

Once the tongue becomes very dry, or if the tongue becomes abused by extra hard scraping or brushing, the outer layer becomes very sensitive. One prevalent condition among older people is “burning tongue syndrome”. It is common among both sexes, but slightly higher among women.

That fact has caused some scientists to believe that there is a hormonal component to “burning tongue syndrome”. Many patients who are diabetic, may notice a burning of the tongue, once they become thirsty. It is important, when one has these types of symptoms, to stay away from alcohol-based oral rinses. The resulting pain is indescribably painful according to many of my patients.

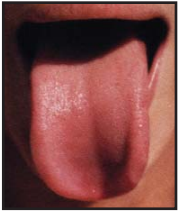
The standard recommendation for Burning Tongue Syndrome is the following:

1. Stop using any commercial dry mouth aids or oral products which contain Alcohol and/or Sodium Lauryl Sulfate .
2. Stop drinking citrus juices (tomato, orange, grapefruit, etc.)
3. Avoid coffee
4. Do not smoke
5. See your physician regarding possibility of Diabetes or Thyroid Problems

A daily oral regimen for those who have Burning Tongue Syndrome:

1. Coat tongue twice daily with TheraBreath Toothgel and let sit on tongue for 90 seconds.
2. Rinse with 1-2 capfuls of Oral Rinse for 90 seconds.
3. Drink 8 glasses of water per day.
4. Take Vitamin C on a daily basis as recommended on label.

Pictures of Various Tongue Formations:



A Healthy Tongue

Note the slight glistening, due to the presence of adequate saliva and the nice pink color.



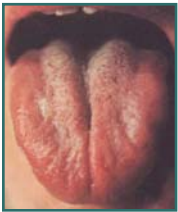
A Coated Tongue

Slight fissure in the middle, coating turns "yellow" in the back showing an increase in the production of sulfur compounds



Dry Coated Tongue

With random fissures



White coating

With deep median fissure



Black Hairy Tongue

Is produced when some of the papillae (finger-like projections from the surface of the tongue) fail to fall off as they normally do. As the length of the papilla increase, debris collects and bacteria grow, producing the characteristic dark "furry" appearance.



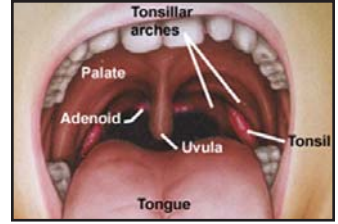
Geographic Tongue

Usually not associated with bad breath. Can be associated with stress, as well as the physical stress of toothpaste containing SLS and mouthwash containing alcohol.

Those Whitish, Yellow Lumps from the Back of Your Throat Are Really Called Tonsilloliths (Tonsil Stones)

An Easy Explanation Of What Tonsil Stones Are

Tonsil Stones (tonsilloliths) are caused by an accumulation of sulfur-producing bacteria and debris that become lodged in the tonsils. This debris (which can include mucus from post nasal drip) putrefies in the back of your throat, and collects in the tonsil crypts (small divots or pockets which appear on the surface of the tonsils).



Where Do Tonsil Stones Come From? Are They Normal? Why Me?

When this debris combines with the Volatile Sulfur Compounds produced by the anaerobic bacteria beneath the surface of your tongue, along with the tonsil stones it can also create chronic Halitosis (and other stubborn bad breath and taste disorders). **Important: If you do not have your tonsils then you will NOT experience tonsil stones (except in people with a history of sore throats).** However this does NOT mean that you should run out and get your tonsils removed. As we get older, tonsilectomies become increasingly dangerous, but aside from that, even if you have your tonsils removed, you will most likely still have bad breath! Why is that?

You see, the sulfur producing bacteria breeding beneath the surface of your tongue (which are integral to the creation of those tonsil stones) are also the most likely candidates to cause bad breath! So, even if you have your tonsils removed, unless you remove or hinder these anaerobic bacteria, your friends may still exhibit those tell-tale signs that YOU have bad breath! (ie pulling away, offering you gum, twitching at their nose, etc.) And, since you can't have your tongue removed (at least not in the U.S.), there is a better idea: Fortunately, getting rid of tonsil stones is not that difficult.

Simple Steps You Can Take To Dissolve Tonsil Stones (Without Surgery!)

A simple combination of AktivOxygen Tablets and Nasal Sinus Drops will effectively eliminate tonsil stones without unnecessary tonsil surgery. Plus, the occasional use of an oxygenating spray (<http://www.therabreath.com/products.asp?cat=4&pid=75>) will help to immediately neutralize the anaerobic sulfur-producing bacteria on contact.

Now keep in mind, if you truly want to prevent bad breath then you must use an oxygenating toothpaste and mouthwash and ideally a tongue scraper to effectively neutralize the anaerobic bacteria from the very back of the tongue. When you use such an oxygenating toothpaste and mouthwash (like TheraBreath) you will experience a residual effect from the AktivOxygen/Nasal-Sinus Drops solution, and it will stop the tonsil stones from ever forming again.



From my clinical tests at the California Breath Clinics (office visits available in Los Angeles and San Francisco (<http://www.therabreath.com/about/office.asp>), we've found that most people following this formula have reported a significant reduction or complete elimination of tonsil stones.

The SOAP in Your Toothpaste May Be Giving You Canker Sores (and Bad Breath!)

Canker sores, also known as “mouth ulcers” plague the lives of millions of people all over the world. These small oral ulcers can make life unbearable when eating, drinking, speaking, or swallowing. Frustration sets in when your dentist or doctor doesn't know how to respond to your questions about these annoying and recurring ulcerations.

Unfortunately, the public ends up creating their own “canker sore” problem, by using commercial toothpastes, which contain an ingredient that has been proven to be linked to canker sores. It's called Sodium Lauryl Sulfate (SLS), and is placed into toothpaste (and some mouthwashes) in order to create foaming! (Sodium Lauryl Sulfate is also the main ingredient in your shampoo - go check it out.)

The harshness of this chemical has been proven to create microscopic damage to the oral tissue which lines the inside of your mouth, which then leads to Canker Sores. That's why TheraBreath Oral Products have never contained Sodium Lauryl Sulfate!

The only group of oral products designed to fight Bad Breath which do not contain Soap (Sodium Lauryl Sulfate) or Saccharin is THERABREATH!

The Science of Canker Sores:

For discussions sake, several terms are interchangeable. Canker Sores are also known as: Mouth Ulcers, Aphthous Ulcers, Recurrent Aphthous Stomatitis, or Oral ulcers. Some people (and doctors) confuse canker sores with “cold sores” (fever blisters). We know both are painful, annoying, and recurring. Here are the major differences:

Canker Sores	Cold Sores
Only occur inside the mouth	Mostly on outside of mouth - sometimes on the inside of the mouth, but only on “hard” surfaces (palate)
Not Contagious	Contagious
Not Viral (not caused by a virus)	Caused by Viruses
Caused by damage to oral tissue, often by Sodium Lauryl Sulfate, a common foaming agent ingredient in almost all toothpastes	The first sign is appearance of small blisters (vesicles)

What Causes Canker Sores (Mouth Ulcers)?

The latest research shows that certain chemical compounds trigger the production of canker sores. Among those items is something that may shock unsuspecting people. It's SOAP. Yes, but it's soap inside your mouth. For many years the major pharmaceutical companies have used Soap (chemically known as Sodium Lauryl Sulfate) in order to create a foaming agent when one brushes their teeth. The reason? The foam does not provide any benefits to the toothpaste, but does "fool" the user (YOU) into thinking that a foaming action is related to a "cleansing" action. After speaking to many of these pharmaceutical companies, the following excuse is used: "We use Sodium Lauryl Sulfate as a surfactant, in order to blend all of our ingredients together and make them work more effectively." (A surfactant is a chemical agent, which allows other chemical molecules to get closer to each other. However, there are many surfactants out there that are not soapy or do not cause oral mucosa damage, resulting in canker sore production."

One of the most exciting advances has been the establishment of the link between canker sores and an ingredient common to almost all toothpastes. The additive SLS or sodium lauryl sulfate may be a culprit in canker sore formation. SLS (sodium lauryl sulfate) acts just like a detergent. It is used in the laboratory as a membrane destabilizer and solubilizer of proteins and lipids. SLS is used in toothpaste to emulsify (mix) oil and water based ingredients together. In your toothpaste it creates the foam you get when brushing. Since it is classified as a soap, you will easily understand why this ingredient can cause drying inside the mouth for many individuals. The dryness is one of several factors that will lead to bad breath.

The thought is that SLS may, in susceptible individuals, cause microscopic trauma or membrane disruption to the skin cells in the mouth. This along with trauma or actions of the immune system may lead to canker sore formation. For additional information, see http://www.therabreath.com/art_cankersores.asp

The BEST Home Instruments for Oral Hygiene

There are many different oral care instruments on the market – some are good, some are not. EVERYBODY would benefit from using any of these home oral care instruments listed below, however the unfortunate truth is that most of you probably won't ever use them because they 'take up too much time'. This is unfortunate since the two devices below are excellent at solving the problems mentioned below.

The instruments below are the ones that I most frequently recommend to my patients with advanced conditions – if you find that you have chronic bad breath, or experience recurring symptoms, then you may greatly benefit from the use of one of these home oral care instruments.

The Hydrofloss is a MUST for People Experiencing the Onset of Periodontal Disease

Now you can get to the Real Source of Gum Disease, Bleeding Gums, and Bad Breath, by using the Hydro Floss with Aktivoxigen Serum!

The HydroFloss combines Magnetohydrodynamics with oral irrigation. By reversing the Polarity of the ions at the molecular level, the HydroFloss inhibits the anaerobic bacteria's ability to attach to the tooth/root surface, before they reach a Critical Mass (which means the beginning of periodontal disease, gingivitis, and bad breath!).



What's the difference between the HydroFloss and other water irrigation devices?

The HydroFloss provides 64% greater reduction in tartar (calculus) and bacterial debris according to the Journal of Clinical Periodontology. It's not JUST Water Pressure like the leading oral irrigator. The HydroFloss uses magnetic technology to "pull" plaque, tartar, and bacterial debris off enamel and out from below the gumline. No other instrument can do this! In fact, those regular oral irrigators you buy at the discount store can actually cause gum problems if you use them at high pressure - the water pressure "forces" the gum tissue away from the tooth surface and may create Periodontal Pockets - breeding grounds for dangerous, sulfur-producing bacteria.

Price: \$84.99 (includes the patented HydroFloss unit and 4 individual Jet Tips), so that the entire family can use this 21st Century Instrument. (The HydroFloss alone is usually sold by dentists to their own patients for up to \$179.95). For more information on the hydrofloss, please go to <http://www.therabreath.com/products.asp?cat=7&pid=45> or call us at 1-800-97-FRESH

Here's a simple explanation on how the HydroFloss provides the highest level of oral hygiene, particularly when used together with AktivOxygen or PerioTherapy Products. Since most of the bacteria are doing their dirty work below the gumline, the only way to attack the cause of the problem is to get into their environment. These Anaerobic bacteria, (related to the ones that cause bad breath) can easily get under the gumline and between the teeth which can cause periodontal disease and gingivitis. Once they are there, they start to reproduce rapidly and will immediately create plaque in the presence of sugars and other types of food (Usually proteins in dairy foods, meat, chicken, fish, etc.)

The sulfur compounds that they produce have a chemical effect on the gum tissue which allows it to become porous and allows other toxins to get under the gums. Once these toxins get into this area, they start to cause gingivitis, periodontal disease, bone loss, loose teeth, and eventually loss of teeth. This degrading process can be prevented by using the Hydro Floss together with Dr Katz's AktivOxygen or PerioTherapy products. The water/AktivOxygen solution that shoots through the HydroFloss tip becomes "magnetized".

Plaque as you know is very sticky, but scientifically it attaches tightly to the enamel and roots of your teeth through “positive” and “negative” charges. The “magnetized” water/Perio2 solution hits the plaque & literally blasts it off the teeth by reversing the polarity at the enamel surface. Nothing else can do this. Once PerioTherapy is blasted under the gumline it will have an “oxygenating” effect on the bacteria & prevent them from producing the sulfur compounds which started the whole process in the first place.

As Periodontal Disease progresses, bleeding and sloughing of oral tissue continues, providing a food source for the anaerobic bacteria to produce more sulfur compounds. It then becomes physically impossible to clean below the gum line. That’s where the HydroFloss comes in. To be used properly, we recommend one dropperful of the included AktivOxygen Serum (or Periotherapy Rinse) to be added to the water trough of the HydroFloss. The oxidizing effect of the AktivOxygen formula destroys the bacteria’s ability to break down the proteins and create the sulfur compounds.

Here’s What Our Patients Say after using the HydroFloss as part of their Daily Routine

Dear Dr. Katz:

“Thanks so much for introducing me to the HydroFloss. I used to use a Water Pik and Listerine for the past 3 years, and because I believed their commercials, I thought it was doing some good, but I still had tons of smelly plaque and my gums bled every time I brushed. I also had a bad breath and sour taste problem when I came to see you in San Francisco last year. You so easily diagnosed my problem...it’s like you read my mind. Every morning I use your PerioTherapy with the Hydro Floss. I can’t function without my PerioTherapy “fix”! As my new boyfriend tells me, “I can’t stop kissing you. “ This would never have happened without your help.”

... D.L., San Mateo, CA

Dear Dr. Katz:

“I just want to let you know that using AktivOxygen with the HydroFloss has given me that same “tingly, fresh” feeling I used to have 25 years ago! I thought it would never come back!”

... R.M., Chicago, IL

Here’s What Dentists and Periodontists (Gum Specialists) Say about the HydroFloss

“It may prove to be the premier dental discovery of the 20th Century”

... W.R. DDS, Birmingham, AL

“The overall improvement has surpassed all our expectations!”

...P. G. DDS, Elizabethton, TN

“Statistically significant improvement in cases of even extreme oral disease. “

... D.S. DDS, Columbus, OH

The Grossan HydroPulse Nasal / Sinus Irrigation System®

Many, many people worldwide experience problems with post-nasal drip or excess mucus. Unfortunately this can be a VERY difficult problem to deal with, and people who experience post-nasal drip are very often subject to bad breath and halitosis. The Nasal-Sinus Irrigator has been proven to be extremely effective at reducing and eliminating post-nasal drip without expensive drugs or medications.

- America's #1 selling and original sinus irrigation system
- Fully encapsulated motor assembly to resist corrosion from additives
- Higher performance, consistent pulse rate, and variable pressure control
- Designed specifically for sinus irrigation. Not a high pressure oral device
- Container designed for correctly adding antibacterial or antifungal agents
- FDA registered for nasal irrigation and UL approved
- Recommended by 37 medical journal articles - 100% Hypo Allergenic



Grossan HydroPulse Sinus Irrigation System®

\$89.00ea - Complete sinus care and breath cleaning system includes:

- HydroPulse Nasal/Sinus Irrigator®
- 2 Original Sinus Irrigator Tips®
- 2 Original Throat Irrigator Tips®
- Breathe-ease® XL Nasal Moisturizer
- Excerpts from, "The Sinus Cure"
- FDA Registered and UL Approved

Recommended by 37 Medical Reports

Used by Professional Sports Teams and Athletic Trainers

"I recommend The Original Sinus Irrigator® and Breathe-ease® irrigation products from Health Solutions. Our team has been using their products as part of our regular health care regimen. We have found the products help our players that suffer with allergy and sinus problems." **Gary Vitti,**
Athletic Trainer Los Angeles Lakers

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Order HydroPulse Sinus Irrigation System® and Receive Bonus Offer Items (\$75.00 Value) including:

- Breathe-ease® XL Advanced Moisturizing & Irrigation Solution
- 2 Original Sinus Irrigator Tips®
- 2 Original Throat Irrigator Tips® and Tongue Cleaner
- The Sinus Cure Excerpts and Health Tips, by Dr. Murray Grossan

"The Original Sinus Irrigator® can be the most therapeutic measure in completely eliminating a sinus infection and treating sinusitis. It can help quickly and dramatically."

*Dr. Robert S. Ivker, Author Best Selling Book "SINUS SURVIVAL"
Past President, American Holistic Medical Association
Professor Dept. of Family Medicine and Otolaryngology
University of Colorado, School of Medicine Boulder, CO*

Gingivitis and Periodontal Disease

I have listed Periodontal disease as a “cause” of bad breath. That is not totally true. Recent research has shown that it is very likely that it’s the other way around! High levels of Volatile Sulfur Compounds actually allow other toxins to enter the area between the teeth and the gumline, creating the first stages of gum disease.

Many studies now show that Bleeding Gums Can Lead to Heart Attacks & Strokes!

Think about this for a moment: You wake up in the morning, go into your bathroom and brush your teeth. After a few brush strokes, you notice in the mirror or sink, that your gums are bleeding. But, you just ignore it & keep on brushing. Would you ever ignore bleeding if it came from your eye, ear, or hand? Of course not! Once bleeding starts – it’s a sign that something is terribly wrong! It also means that your body armor (your skin, or in this case - your oral mucosa) is open & susceptible to invasion by unwanted bacteria & viruses.

The skin of the oral cavity is known as Oral Mucosa. It is very rich with blood vessels and if outside bacteria and the toxins they produce get into the blood stream, they are off

and running throughout your body. As the illustration above shows, plaque and tartar buildup destroy the health of your gums and allow the supporting bone to weaken – leading to eventual tooth loss, if not caught in time (Gum Disease - not decay - is The #1 cause of Tooth Loss). However, what the most recent International research shows and what American Dentistry has failed to comprehend is that Sulfur Compounds produced by anaerobic bacteria are the True Villains in many oral disorders - from swollen and bleeding gums to Bad Breath. And now as groundbreaking research shows, eventually to systemic problems such as heart disease, strokes, and pneumonia.



Anaerobic Bacteria Produce Sulfur Compounds, Which Allow Toxins to Enter Your Blood Stream Through Swollen Gums!

These anaerobic bacteria have the ability to extract sulfur compounds from proteins produced when your gums are swollen and bleeding. Some of these sulfur compounds are classified as Thiols. These dangerous sulfur compounds have recently been found to allow Other Bacteria – and the toxins they produce – to infiltrate below the gumline. If your gums are already swollen and bleeding, these bacterial toxins may get into your bloodstream and travel throughout your body, most significantly to your brain - leading to strokes, or to the heart - leading to heart attacks!

Professors Robin Seymour and James Steele of the University of Newcastle Dental School in England say that you are less likely to get coronary heart disease if you have a healthy mouth. In fact, these 2 specialists reviewed 10 studies dating back to 1965. Two of the larger studies, done here in the U.S. had striking evidence proving this point. Their analysis was reported to the British Dental Journal. Their article stated that Periodontal

disease (gum disease) may be as significant as smoking and high cholesterol when it comes to Heart Disease!

As the doctors stated, "An interaction between specific bacteria in dental plaque (anaerobic sulfur-producing bacteria) and platelets (the components of blood involved in blood clotting) has also been suggested as contributing towards the association between periodontal disease and coronary heart disease."

A recent 1996 study involving over 1,100 individuals found the incidence of coronary heart disease, fatal coronary disease, and strokes were all significantly related to their baseline periodontal status. Of course, smoking and diabetes have been implicated in both Heart Disease and Gum Disease. High Sugar Intake and Lack of Fluoride are also related to tooth decay and Gum Disease and could be additional contributory factors to Heart Attacks & Strokes.

Periotherapy products contain oxygenating anti-bacterial agents, fluoride, xylitol, Co-Q10, zinc gluconate, aloe vera, and tea tree oil. No artificial flavors, colors, etc. and no sodium lauryl sulfate (soap)!

Periotherapy is available at <http://www.therabreath.com/products.asp?FID=5>

They suggested that periodontal disease should be looked at as a chronic infection. Dr. Seymour stated that there is a lot of evidence now saying that chronic infections may be an important trigger for "atheroma" formation (degenerative changes in the arteries). The link between bleeding gums and heart disease & strokes appears most obvious in men aged 40-50 years old.

Dr. Geoff Craig of the British Dental Association welcomed the report, stating, "Dentists should continue to emphasize that improving dental health generally - and gum health in particular - helps to maintain natural teeth and may also help to reduce the risk of coronary heart disease."

More Research - This Time from the United States

According to a recent study at the University of Minnesota, 2 kinds of bacteria breeding in dental plaque around inflamed gums can bring about "blood clumping". This is technically speaking the first step towards forming a clot that can trigger a heart attack.

At the university, experiments on rabbits found that these bacteria, which originate in the mouth, also caused abnormalities in the heart! Again, the standard risk factors like high cholesterol, lack of exercise, poor diet, and being overweight need to be amended by adding Periodontal disease (inflamed bleeding gums and excess sulfur produced by anaerobic bacteria.)

The bottom line..... Gingivitis and Gum Disease can be extremely damaging to your health, NOT just to your breath! You should be using premium oral care products such as Periotherapy or TheraBreath if you have any concerns about the health of your gums.

For more information go to: <http://www.therabreath.com/products.asp?FID=5>

*Portions of the above originally appeared at ABCNews.com

FAQ's (Frequently Asked Questions)

Everything You Wanted To Know About Bad Breath, Dry Mouth, Lousy Tastes and Oral Health, But Were Afraid To Ask

Why doesn't my dentist or physician know about this treatment?

The information is out there in many microbiology and dental journals. If your health care professional were interested in treating you, I'm sure they would have taken the time to look for this research. In fact, it's been 10 years since i started performing this treatment, and just recently, The American Dental Association finally agreed with what I have been saying all this time..."Bad breath originates on the back of the tongue and in the throat." This differs from the disinformation that they initially put out back in 1995 when the Sacramento Bee wrote about my clinical treatment. They attempted to "disqualify" my patient successes and instead urged the public to use ADA approved products which contain high levels of Alcohol, SOAP (Sodium Lauryl Sulfate) and Saccharin.

The ADA Seal of Acceptance is no assurance that an oral product will assist your bad breath problem. In fact, the ADA has ignored the entire problem of Halitosis and has classified it as "cosmetic". A very sad state of affairs from an organization that was intended to help the public.

One last comment on this topic. In early 1997 I appeared on TV in Detroit, where I received nearly 700 phone calls about The TheraBreath System. One of the callers was a dentist in a Detroit suburb, whose young daughter had a bad breath problem. The dentist tried the TheraBreath products on her daughter and called the next day to tell me that it worked like a miracle. When I asked the dentist if she were interested in providing TheraBreath to her own patients, she told me that she couldn't because my products did not have an ADA Seal of Acceptance, however, she still uses the products for her daughter! The reason: She was afraid of pressure from the ADA, of which she was a member, if she would provide non-ADA seal products to her patients!

Whenever I have post nasal drip, the problem gets worse. Doesn't that show that it comes from the sinuses?

No. That's because the anaerobic sulfur-producing bacteria that create bad breath live and breed within the back of the tongue and in the throat. (see page 3) They have the ability to digest mucus (because of high protein content) & then break it down into sulfide

molecules, which cause the bad breath & bitter, sour taste. The correct way to fight bad breath due to post nasal drip is to use a combination of our TheraBreath Nasal Sinus Drops and AktivOxigen tablets, creating an oxygenating solution to cleanse the throat and tonsil area.

Do I have to do this treatment for the rest of my life?

The only way to effectively stop these bacteria from producing these Volatile Sulfur Compounds, is to use an Oxyd-8 based product. No other compounds will perform this action. The bacteria reproduce every 10-12 hours and that is why the treatment must be done throughout the day. After several months, there is a residual effect, whereby the formulas have a longer lasting feeling. Some patients are then able to get by with performing the procedure only twice daily, however, for the best results, most perform the procedures three times daily.

Many patients use between 2-3 bottles of rinse per month. A large toothpaste lasts about 5-6 weeks. If you stop, the problems will come back again, because the bacteria will recognize the difference within a few days. The products were designed to become your daily oral hygiene system and now with tooth whitening (TheraBrite) and periodontal treatments (PerioTherapy) as part of our entire system, you'll never need to use other products. By the way, most people spend less than \$1 per day to maintain their fresh breath and taste.

Once in a while I get these small white round dots that appear on my tonsils and sometimes I even cough them up. They have an extremely strong odor. What are they and is this related to my breath and taste disorder?

Those little round globules are known as Tonsiloliths (see page 23) and they are most definitely related to Halitosis and sour taste. They are created by sulfur gases produced by these bacteria (which are located across from the tonsils in the throat area). The sulfur gas mixes with the mucus and thick saliva in the back of your throat and after a period of time, condense into these concentrated, odorous globs.

I have had many patients who have actually had their tonsils removed due to misinformation from physicians about this problem. Of course, these patients still had bad breath after having the tonsillectomy, because BAD BREATH DOES NOT START IN THE TONSILS! (only on the back of the tongue). However, it can branch off into the tonsils, secondarily.

I scrape my tongue all day, but yet I still have bad breath. My dentist gave me this huge tongue scraper and told me to use it daily because it might scrape off the bacteria. I gag just by looking at it. Is there any truth to this or is it just one of those fads?

Now, that's a good question! In my opinion, and based on helping tens of thousands of people who have suffered with bad breath, tongue scraping by itself is NOT the answer (although it is still an important part of treatment – read more below). In fact, I have seen dozens of cases in my clinics where people have just scraped too hard and for too long, resulting in damage – a painful, dry, and burning tongue!

We prefer to use the tongue cleaner as an application device for an OXYD-8 product (TheraBreath toothpastes – (<http://www.therabreath.com/products.asp?CAT=3>) with a very gentle cleansing motion on the tongue from the back to the front. This helps to apply the TheraBreath gel below the tongue's surface to where the bacteria actually live. Remember the Bacteria cannot live ON the tongue surface... they are anaerobes and by definition, they can't survive on the surface.

Which is the strongest of your formulas?

TheraBreath PLUS (<http://www.therabreath.com/products.asp?FID=2>) contains a great combination of anti-microbial agents as well as components that are great for oral health in general. The products in the PLUS line include Oral Rinse, Toothpaste, Spray, PowerDrops, and Gum.

My boyfriend sometimes has bad breath. Is it possible for him to give it to me when we French kiss?

Simply put, you can't give bad breath to someone else. The bacteria that create this problem are actually good bacteria and are part of the normal oral flora (the mix of bacteria that you need to function properly). It's possible that the bacteria in your boyfriend's mouth (tongue, throat, tonsils) are reacting to his dry mouth, which could have been created by smoking, medication, or alcohol (in beer, wine, or in old-fashioned mouthwashes). Tell him about TheraBreath and both of you will soon be able to kiss with confidence.

I can smell the bad breath coming from my nose when I exhale. What can I do about this? Am I imagining things?

You are not imagining anything. There are odors that can be detected in some cases as they emanate from the nostrils. This type of odor is due to mucus in the nasal passage and its reaction to bacteria in the nostrils (not in the sinus). It may also be a by-product of the reaction between mucus, post nasal drip, or allergies in the area beyond the sinus (in the naso-pharyngeal area and the throat/tonsil area). The solution is quite simple – TheraBreath Nasal-Sinus Drops (<http://www.therabreath.com/products.asp?CAT=4>) are the only oxygenating/zinc formula to attack this type of problem.

Is there any way I can whiten my teeth and get rid of bad breath at the same time, so I don't have the time to use dozens of different products several times a day?

Actually, our TheraBrite toothpaste (<http://www.therabreath.com/products.asp?CAT=6>) is BOTH a whitening toothpaste AND a breath toothpaste. Just use it in conjunction with any of our oxygenating rinses - TheraBreath, AktivOxygen, TheraBreath PLUS, and PerioTherapy - All of our products are designed to work together.

And we now have a "safe" bleaching system -- TheraBrite Plus Bleaching -- check it out online (<http://www.therabreath.com/products.asp?CAT=6>). It whitens in only a few days and has no sensitivity.

Why don't your products carry the ADA Seal of Approval?

First of all, it is not really The ADA Seal of Approval, but actually the ADA Seal of Acceptance. This is very different. The American Dental Association does not seek out the "BEST"

products in the marketplace. Instead, the manufacturer, if they wish, goes to the ADA with their product and asks the ADA to give them the seal. The seal is given under certain conditions, including the fact that if the product is toothpaste, it must contain fluoride. Also, there is no category for Halitosis, although there is for anti-cavity formulation and Gingivitis. Lastly, there is a very large fee that must be paid to the ADA for the seal to appear on the products. The cost of the seal would make TheraBreath even more expensive and would not provide any benefit at all to my patients.

The Seal may not be used on products sold outside the U.S., which is also a problem for me, because our products are sold in 68 different countries. Consequently, a great deal of the cost would not be used because more than half of the products would leave the US anyway.

Can I still use my regular toothpaste and mouthwash if I use TheraBreath?

Absolutely not. Almost all commercial toothpaste's contain Sodium Lauryl Sulfate (SOAP), placed in toothpaste in order to create a foaming action, so that you think that something is actually happening. It has no beneficial effects at all. Unfortunately it will also inhibit the potency of the active ingredients. That is why those who use Oxyfresh toothpaste should read the ingredients in their toothpaste: It contains Sodium Lauryl Sulfate!

Secondly, almost all mouthwashes contain alcohol. And as you know alcohol makes the mouth drier, which will then make the breath and taste worse. This will negate the benefits of the oxidation process. TheraBreath Oral Rinse and Toothpaste were designed to replace all of those old-fashioned 19th century formulas that make your mouth dry. However, we made sure to include all of the good stuff your dentist wants you to use:

- Our Toothpaste comes in both a Sodium Fluoride version or a NON-Fluoride version
- Our Toothpaste Does not contain Sodium Lauryl Sulfate – the harsh detergent linked to canker sores and dry mouth.
- Our Toothpaste Does not contain Saccharin – a questionable artificial sweetener
- Our toothpaste uses Xylitol – a natural non-sugar, sweetener from Finland, proven to fight decay.
- Our toothpaste contains two natural mineral pyrophosphates to fight tartar and plaque
- Our toothpaste contains natural essential oils of mint – Essential oils fight bacteria
- There are NO artificial colors or flavors in ANY of our toothpastes (no blue or green)
- TheraBreath toothpastes use our unique microscopic gel formulation which allows it to penetrate deeper below the tongue's surface for better cleaning.
- Our Oral Rinse does not contain any alcohol, artificial colors or sweeteners AND no detergents like TSP (the Tri Sodium Phosphate used in Spic and Span and also in another line of breath products!!)

Why do I have bad breath when I brush and floss all day, but my boyfriend rarely brushes his teeth and never flosses and his breath is like baby's breath. How can that be? It's not fair!

Oral Hygiene and fresh breath are actually two different things. It's important to brush and floss because that's how you keep your teeth inside your head forever, but that's not how you tackle bad breath. Your boyfriend may have a lot of saliva and a smooth tongue. He may eat foods which do not stimulate the bacteria, such as high protein dairy foods. On the other hand, you may have a dry mouth all the time, due to your job, habits, or due to your menstrual cycle. And, it's very possible that your mouthwash and toothpaste are making your breath worse, as well as breath mints that contain sugar. Or maybe, your boyfriend uses TheraBreath without your knowledge?

If I run out of TheraBreath oral rinse and toothpaste, is there something I can buy in the store that will help until I can get more?

It's sad to say this, but probably not. It's because of the alcohol in the mouthwash and the detergent in the toothpaste. What's even more sad is that Crest now makes a toothpaste that combines detergent and alcohol...why? Just for taste? I would recommend that you rinse with warm salt water and brush with baking soda. The good news is that a growing number of stores in the US now carry several TheraBreath Products (http://www.therabreath.com/loc_retail.asp).

You have so many products, which ones should I use to get started – I'm retired and on a budget.

The basic products are always TheraBreath Oral Rinse and TheraBreath Toothpaste. If you need to use something in the middle of the day, I would suggest you try our new ZOX mints (<http://www.therabreath.com/products.asp?CAT=5>). They are very affordable and they are the longest, lasting breath protection that we have in a 'quick to use' format.

Is TheraBreath safe for children to use?

Yes. No problem at all.

Does the Therabrite gel and oral rinse have the same ability to fight bad breath like the rest of the product?

YES.

What causes the white coating on my tongue?

Sulfur-producing anaerobic bacteria living below the surface of the tongue (away from oxygen) create chemicals such as Hydrogen Sulfide (the rotten egg smell) when they contact proteins. When the mouth becomes dry, an anaerobic condition is created, allowing them to create MORE of these compounds, which then rise to the tongue's surface. One notices this reaction if you don't eat or drink for several hours, or if your mouth is always dry.

Can I use your products even if I had some work done to my teeth?

Most definitely. It is kind to tooth enamel, porcelain, etc. Actually, it is beneficial to damaged oral tissue.

Is bad breath hereditary? - I think I passed it on to my kids.

NO. One can't inherit the bacteria, BUT, one can inherit a specific shape of tongue (just as one inherits the shape of their father's nose) or a feature of the tongue, such as a deep groove down the middle or longer papillae (the fibers that make up your tongue). Both of these conditions allow trapping of more bacteria, which then leads to bad breath.

Can bad breath be cured?

There is no such thing as one time cure-all for bad breath (or headaches, or toothaches, or acne, or dandruff, or diabetes, etc). Because the bacteria are always there (and are part of the natural flora of bacteria that one needs to start off the digestive process), you can't kill them off permanently. However, they can be treated with oxygen and other natural compounds that prevent them from creating sulfur odors for about 12 hours or more, in some cases.

Do your ZOX mints or TheraBreath gum contain any artificial sweeteners?

NO. We use Xylitol (made from the bark of the white birch tree found in Finland) and Sucralose, which is made from real sugar, but altered so that it tastes like sugar, but does not cause decay. In fact, diabetics can even use it also.

Appendix A: The Daily Oral Regimen I Recommend for Chronic Halitosis

These are the exact instructions that I recommend for the most severe cases I treat. You may find that you'll need to adapt them to suit your own personal preferences. These instructions are very thorough – most people will find that when they move into maintenance phase (after the initial 20-30 days to remove the accumulation of VSC's) they are not quite this thorough. This is perfectly OK - the goal is to make sure the products are working for you. It is important that you remember not to use any water with these products as they need to remain undiluted. - Also, keep the bottle of oral rinse and the toothpaste tube tightly closed and away from the sun when not in use. Never store the mouth rinse in a clear plastic bottle.

Instructions:

1. Take a normal-sized string of dental floss and wet the entire piece with TheraBreath oral rinse. Then floss your teeth thoroughly so that the medicated rinse will pass through all of the tooth contacts. This step ensures that the Chlorine Dioxide will attack the bacteria located here.
2. Gently scrape your tongue with the rounded edge of the tongue scraper 4-5 strokes, moving the tongue cleaner forward each time. This will help in removing the mucus layer which has been protecting the bacteria living on your tongue. (Do not scrape vigorously to the point of bleeding, but firm enough to remove the mucus layer.)
3. Rinse off the tongue scraper, then apply a small amount of TheraBreath toothgel to the

- rounded edge of the tongue scraper and gently scrape another 4-5 strokes. This step applies the powerful oxygenating toothgel to the newly exposed surface of your tongue, thus allowing the oxygenating action to begin. Reach as far back as possible without gagging. **DO NOT RINSE,** but you can then wash off the tongue scraper after this step.
- Place a normal amount of TheraBreath toothgel on a dry toothbrush and brush for 2-3 minutes. Besides your teeth, also gently brush your tongue, reaching as far back as possible. Make sure to include the roof of your mouth and the inside of your cheeks with this brushing. (The bacteria are extremely sticky and end up almost everywhere in your mouth.) **Notice that I keep stressing the word gently** - you do not have to brush hard, but make sure that you are thorough. When brushing your teeth, remember to angle the brush towards your gumline, feeling the bristles gently sliding under the gumline. Do not rinse with water after this step. You may, however, spit out any excess saliva and toothgel.
 - In order to rinse out your mouth properly and in order to attack the bacteria, pour 2 capfuls of TheraBreath medicated rinse into a clean glass. Rinse the toothgel from your mouth with this rinse. While doing so, “swish” the rinse all over your mouth for 90 seconds in order to cover all the oral surfaces with the concentrated oxygen. It is **NOT RECOMMENDED** to drink directly from the bottle - this will likely contaminate the rinse.
 - Take 2 fresh capfuls of the rinse, and gargle for 90 seconds, attempting to get the rinse as far back as possible, without gagging. After gargling, spit out the rinse. **(Do not eat or drink anything for 10 minutes following this procedure).** If some of the rinse is swallowed, do not be alarmed. It is completely safe if digested (see below)
 - Blow your nose to clear out any excess mucus from your nasal passages. Put 1-2 of the TheraBreath Nasal-Sinus Drops in each nostril. Allow the drops to run through your sinus passages and down the back of your throat.

Please Read the Following:

If a Sour, Bitter, or Salty Taste Persists: In some cases, a difference in taste may occur for the first few days after starting the products. **THIS IS ONLY TEMPORARY.** To overcome this sensation more rapidly, sprinkle some baking soda on your toothbrush and then **VERY GENTLY** brush your tongue. Do this twice per day for three days, and continue using the products as directed. This counteracts any acidity you may have in your mouth.

SWALLOWING THE RINSE: Many people prefer to actual swallow the TheraBreath rinse. While this is perfectly safe, most patients prefer to swallow the AktivOxygen Rinse (made from the tablets) instead of the mouthwash since it has no flavor. In this case, we recommend using your regular TheraBreath rinse to gargle, but swallowing 1-2 capfuls of the AktivOxygen rinse at the end of your oral routine. The purpose of swallowing the rinse is to reach bacteria that are beyond your ‘Gagging Point’ and therefore have not yet had contact with the medication.

Some Additional Tips and Pieces of Advice:

1. Cut down on dairy foods - They are very easily converted into sulfur compounds by the bacteria.
2. In order to replenish oxygen-rich saliva, you need to drink 6-8 glasses of water daily.
3. Avoid sugar in gum and mints (you may want to try TheraBreath oxygenating gum, available at www.therabreath.com).
4. Avoid alcohol - It makes the mouth very dry.
5. In some cases, especially for those of you who may have a poor diet, you will need to boost your "immunity" to this type of bad breath by adding basic vitamins and minerals to your diet. You can do so with a combination of Immune Therapy and our Micellized iVitamin/Minerals.
6. There are some cases which simply need a higher concentration of the clinically-proven components. That would call for TheraBreath PLUS formulas.
7. Smoking should be avoided as much as possible because it creates an instant dry mouth.
8. We have found that an ideal time to use the products is right before bedtime, it helps to cut down on morning breath.

Appendix B: Where to Buy TheraBreath (and some money-saving coupons!)

In the past 5 years, TheraBreath has become the fastest growing oral care brand in the nation. TheraBreath can be found worldwide in 68 countries and in more than 35,000 retail locations throughout the USA. The entire TheraBreath product line is also available direct.

To Order TheraBreath Directly

Go online to www.therabreath.com or Call 1-800-97-FRESH or 323-933-7225.

As a special gift for reading through the 'Bad Breath Bible' I'd like to give you a coupon code that you can use when you order direct. Just enter in the coupon code 'DFree' in the Coupon Center when you order online OR mention it when you call and you'll receive Free Ground Shipping in the US and 6 rolls of my new ZOX Breath Fresheners.



Again, simply use Coupon Code: 'DFree' when you order.

To Find TheraBreath in a US Retail Store:

TheraBreath is available in over 35,000 locations across the US. Most stores will only carry the regular TheraBreath oral rinse and toothpaste. For a complete listing of store locations near you go to http://www.therabreath.com/loc_retail.asp or call 800-97-FRESH or 323-933-7225. Below are 2 money-saving coupons you can use to save \$1 each off the oral rinse and toothpaste when you purchase them at any retail location.



Save \$1.00

Dr. Katz TheraBreath[®]
ORAL RINSE



RETAILERS: California Breath Clinics will reimburse you the face value of this coupon plus 8 cents handling for all coupons redeemed in accordance with this offer. Invoices proving purchase of sufficient stock must be provided upon request. Consumers are limited to one coupon per purchase. Cash value is 1/100th cent. Send all coupons to: **CBRC/Universal, P.O. Box 222510, Hollywood, FL 33022-2510.**

Save \$1.00

Dr. Katz TheraBreath[®]
TOOTHPASTE



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To Order TheraBreath Internationally:

TheraBreath is available through international distributors in 68 different countries worldwide. To find TheraBreath formulas in your country, go to: http://www.therabreath.com/loc_distributor.asp

ANTI-DIARRHETIC

Imodium AD	.....	.loperamide
Lomotil	.....	.diphenoxylate with atropine
Motofen	.....	.difenoxin with atropine

ANTI-HISTAMINE

Actifed	.....	.triprolidine with pseudoephedrine
Benadryl	.....	.diphenhydramine
Chlor-Trimeton	.....	.chlorpheniramine
Claritin	.....	.loratadine
Dimetane	.....	.brompheniramine
Dimetapp	.....	.brompheniramine with phenylpropanolamine
Hismanal	.....	.astemizole
Phenergan	.....	.promethazine
Pyribenzamine (PBZ)	.....	.tripelennamine
Seldane	.....	.terfenadine

ANTI-HYPERTENSIVE

Capoten	.....	.captopril
Catapres	.....	.clonidine
Coreg	.....	.carvedilol
Ismelin	.....	.guanethidine
Minipress	.....	.prazosin
Serpasil	.....	.reserpine
Wyntensin	.....	.guanabenz

ANTI-INFLAMMATORY ANALGESIC

Dolobid	.....	.diflunisal
Feldene	.....	.piroxicam
Motrin, Advil	.....	.ibuprofen
Nalfon	.....	.fenoprofen
Naprosyn	.....	.naproxen

ANTI-NAUSEANT/ANTIEMETIC

Antivert	.....	.meclizine
Dramamine	.....	.diphenhydramine
Marezine	.....	.cyclizine

ANTI-PARKINSONIAN

Akineton	.....	.biperiden
Artane	.....	.trihexyphenidyl
Cogentin	.....	.benztropine mesylate
Larodopa	.....	.levodopa
Sinemet	.....	.carbidopa with levodopa

ANTI-PSYCHOTIC

Clozaril	.....	.clozapine
Compazine	.....	.prochlorperazine
Eskalith	.....	.lithium
Haldol	.....	.haloperidol
Mellaril	.....	.thioridazine
Navane	.....	.thiothixene
Orap	.....	.pimozide
Sparine	.....	.promazine
Stelazine	.....	.trifluoperazine
Thorazine	.....	.chlorpromazine

BRONCHDILATOR

Atroventipratropium
 Isuprelisoproterenol
 Proventil, Ventolinalbuterol

DECONGESTANT

Ornadephenylpropanolamine with chlorpheniramine
 Sudafedpseudoephedrine

DIURETIC

Diurilchlorothiazide
 Dyazide, Maxzidetriamterine and hydrochlorothiazide
 HydroDIURIL, Esidrixhydrochlorothiazide
 Hygrotonchlorthalidone
 Lasixfurosemide
 Midamoramiloride

MUSCLE RELAXANT

Flexerilcyclobenzaprine
 Lioresalbaclofen
 Norflex, Disipalorphenadrine

NARCOTIC ANALGESIC

Demerolmeperidine
 MS Continmorphine

SEDATIVE

Dalmaneflurazepam
 Halciontriazolam
 Restoriltemazepam

ANTIDEPRESSANTS

Prozac	Norpramin	Pertofrane
Elavil	Adapin	Valium (occasionally)
Imavate	SK-Pramine	Tofranil
Aventyl	Vivactil	Zoloft
Paxil	Sigequan	

ANTIPARKINSONISM

Akineton	Artane	Laradopa
Parsidol		

ANTI-HISTAMINES (Cold Medications)

Actifed	Benadryl	Comtrex
Dimetapp	Pheran	Triaminic
Vistaril	Historal	

ANTI-HYPERTENSIVES (High Blood Pressure Medication):

Beta Blockers, Diuretics, Anti-Coagulants		
Isemelin	Aldomet	Rautensin
Minipress	Inversine	Serpasil
Catapres	Inderal	Hyperoid
Aquatensin	Moderatic	Inderide
		Diazide

ANTISPASMODICS & ANTICHOLINERGICS (GASTROINTESTINAL TYPE)

Quarzan	Vistrax	Combid
Pro-Banthine	Anaspaz PB	Donnatal
Pathibate		

ANTISPASMODICS & ANTICHOLINERGICS (URINARY TYPE)

Pyridium	Cystospaz	Ditropan
Urispas	Trac-Tabas	

ANTIPSYCHOTIC AGENTS

Haldol	Rau-Sed	Serpasil
Thorazine	Stelazine	Comazine
Moban	Daxolin	Lithane
Lithonate		

Appendix D: Testimonials from Satisfied Patients

These are just a small sampling of the hundreds if not thousands of testimonials that we have on file. For a complete listing, go to: <http://www.therabreath.com/about/testimonial.asp>

-3/18/2002

Good day to you, Dr Katz!

I just bought my Therabreath starter kit and I want to tell you how AMAZED I am! Its effect is breathtaking!!! I bought it thinking, "Hmm, just another product, I don't think it will work..." Imagine my surprise when I woke up the next day with no morning breath at all!

You seriously should win an innovation/medical awards for creating such a life changing product!!!

I am now able to talk to people without constantly worrying about my breath. I don't even need to cover my mouth. I never use to indulge myself in conversations for the fear of my bad breath, but now I will need to adjust myself to become the extrovert that I really am!! Watch out world! :)

I would like to thank you, Dr. Katz for such an amazing product. Your products have a fantastic effect on one's self-confidence. I only hope that it is more accessible to get in shops.. so I can easily pick it up, whenever, wherever. But whatever it is Dr Katz, I am your new and loyal supporter!

Thank you!! I cannot emphasize enough of how much I appreciate your products!

Warm Regards, Sheri

3/11/2002

Dear Dr Katz,

I am so pleased to say that I'm cured . The solution was in your nasal drops as you suggested . I received it yesterday from Therahealth London and it worked like magic! . I just can't believe the difference . I've now used your Therabreath Plus rinse, gel, power drops, and nasal sinus drops. They're absolutely great...I am very grateful to you. Thank you very much .

Regards, Kumar

2/23/2002

This product is unbelievable for bad breath elimination! It has been wonderful to finally be able to enjoy kissing my husband and for that I thank you!

Donna**2/3/2003***Dr. Katz,*

I'm very thankful for your TheraBreath products. I have used your product for three days now, and it ABSOLUTELY WORKS!

I am a 48 year old, single, professional male. Bad breath has hindered my professional and emotional well-being. As an engineer, my profession requires me to interact with my colleagues during design reviews and oral presentations. These interfaces are mostly up close and personal. The signs were there; people would politely back away, pinch their noses, or offer me gum. In many cases, I could not look people in the eye when I discussed important issues. How demoralizing! This has gone on for ten years now. As a result, I carried with me a toothbrush, toothpaste, and mouthwash as a defense mechanism. I accidentally read about your product through an MSN article which identified various celebrities who had bad breath. And the rest is history! I am and will be indebted to you for life for your scientific research and will be a loyal customer forever!

Word of mouth would surely help sell your products especially from me since I do not suffer from bad breath!

Thanks A Million, Paul**2/2/2003**

I have been using TheraBreath products for five years. You probably receive a lot of testimonials so I won't bore you-but it has changed my life and I will forever be in debt to you.

Sincerely, Carla**1/13/2003***Dear Dr. Katz,*

Well...it's a MIRACLE! Hate to say it but I don't trust any internet "gurus" who claim to have the "answer" but I had no choice because my bad breath was affecting many areas of my life. My close friend was brutally honest and told me. I was stumped because I brush my teeth at least twice a day!

After that, I thought about the people that I mingle with and decided to avoid them because of my problem. It was humiliating to say the least that I have bad breath. And I wondered how others viewed me all this time!

So, I decided to try your products. I must admit, it wasn't sweet or had the alcohol taste which I was used to. I really didn't know if this would work.

However, I followed the directions and after the first application, I noticed my tongue was no longer brown towards the back and the whole tongue was bright, clean, and pink. I told my

wife and she was not overly impressed. She said that the real test will be after dinner. I was a little apprehensive but after I gave my wife the "breath test", she was amazed as well! I am using it for almost a week now and I have to say that I am a customer for life.

Please feel free to use any part of this e-mail letter and if you need customers for an infomercial, please let me know. I'll be more than happy to be a part of it. I realize that I would have to audition because I can't be the only satisfied customer-lo!

Rich

1/18/2002

Dr. Katz,

Thank you for the prompt response to my letter....I have given a couple of bottles to my friends to show them the great products you offer...I am extremely satisfied and I want to thank you again...For my friends who do not have a computer, I have printed out a list of stores located near them, in which they can purchase their products.

Brenda

12/13/2003

Dr. Katz,

Finding your products was one of the best things that has ever happened to me. People no longer back away or cover their noses when they are around me. My breath smells like Sweet Nothing!! Nothing is Good!!! :-) Thank you from the bottom of my heart.

Ms. Grateful in Atlanta

11/28/2003

I have been wanting to email you for the last two months to thank you enormously for your Therabreath Oral Rinse. Please don't EVER STOP making the product!

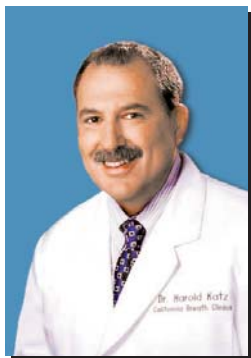
Sincerely, Dr Cook, DC

11/12/2003

Dear Dr. Katz,

I've had bad breath since I came to know the meaning of the word. I tried all sorts of concoctions until Therabreath came along. I couldn't believe the results. Thanks for making a product that changed my life and I'm sure other lives as well.

Thanks again, Eric



Tens of Thousands of People Worldwide Have Discovered the TRUTH About Bad Breath and Halitosis...

Here's what just a few of our thankful patients had to say...

2/17/2003

I have been using your products for almost 3 years and I must say that they really work!

-Thanks, Roy

2/11/2003

Hi! I'm getting good results with your products. Your products are getting rid of the bad taste and the tonsil stones. I can't believe that these tonsil stones seem to be disappearing. I never had this problem until I had surgery to try to stop acid reflux. After the surgery, I had a terrible taste in the back of my mouth and tonsil stones.

-Thanks, Peter

1/6/2003

Thank you for your information. I did purchase your tooth gel, mouth wash, and breath spray from Walgreens a few days ago and love them.

-Sue

7/1/2002

I've used your extra strength rinse ever since it came out. Your product is the best in the market.

-Elizabeth

5/9/2002

Good Morning! I am stunned at the immediate improvement of my breath after trying your TheraBreath products. I feel clean for the first time in my life. I am anxious to begin my new life with the freedom of knowing that I can stand close to people without being offensive. I'm thrilled to think that I can now express myself with full confidence. No one can imagine how much an individual is held back when they know that they can offend their family and friends because of their breath. TheraBreath has given me a new life. Thank you.

-Leya from Yokohama

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